



## Application Solutions - Packaging Industry

Issue 1 Volume 3

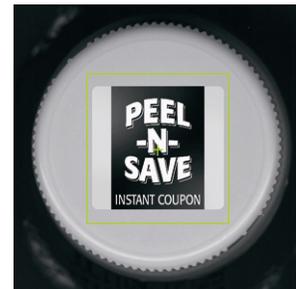
### Inspecting Peel-off Labels

**Challenge:** Peel-off labels used for promotions and additional customer information consists of a self-adhesive layer and one or more perforated and/or folded layers. Labels are applied at a stage where the surface is flat to increase yield and simplify application. However, several quality inspections are required. One source of problems is the applicator damaging or removing perforated parts from the label. Even after proper label placement, the final forming and cartoning steps before shipping present opportunities for damage.

**Solution:** Detect Label Presence/Absence

To be absolutely certain the right label was applied, a matching sensor can verify label presence/absence based on a selected section of printed characters. Matching sensors can be used to compare printed characters on the label to the type of product. This provides the highest level of confidence that the *right* label is present and solves two problems in one step.

The pattern matching function can be used for this; however, newer sensors provide a special character matching capability to refine the inspection. (Omron's ZFV multifunction models offer this function.)



### Label Condition Before Packing

Damage to the label can take place in several ways as the product travels between label application and final packing locations. Here are some of the most common label problems detected:

- Improper adhesion where a corner curls up
- Label panels that have come loose so the panels unfold and may get crumpled
- Label damage from physical contact with conveyor rails or impinging equipment in the form of tearing, scratching or smudging



Detecting label condition can be handled by simple pattern matching sensors or may involve some higher-level inspection capabilities, such as edge detection and measurement, found in full-featured vision systems. Omron's ZFV sensor performs multiple inspection functions with the extreme simplicity of setup and operation of a pattern-matching sensor.